

*Handwritten signature*

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/501,959	MURAKAMI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tuyen Q. Tra	2873	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 04/26/2005.
2. ☒ The allowed claim(s) is/are 1-16.
3. ☒ The drawings filed on 21 July 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>1004 and 0405</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                                    | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

**DETAILED ACTION**

***Reason For Allowance***

1. Claims 1-16 are allowed.
2. Following is an examiner's statement of reasons for allowance:

The prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the independent claim(s), in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claim 1, which include a birefringent layer(a) and a transparent film (b), wherein the birefringent layer and the transparent film are satisfying all the following formulae (I), (II) and (III):

$$\Delta n(a) > \Delta n(b) \times 10 \quad (I)$$

$$1 < (n_x - n_z) / (n_x - n_y) \quad (II)$$

$$0.0005 \leq \Delta n(a) \leq 0.5 \quad (III)$$

$\Delta n(a)$  is a birefringent index of the birefringent layer (a) and  $\Delta n(b)$  is a birefringent index of the transparent film (b), respectively represented by the following equations:

$$\Delta n(a) = [(n_x + n_y) / 2] - n_z$$

$$\Delta n(b) = [(n_x' + n_y') / 2] - n_z'$$

in the above formulae (II) and the above-stated equations,  $n_x$ ,  $n_y$  and  $n_z$  indicate respectively refractive indexes in an X-axis direction, a Y-axis direction and a Z-axis direction in the birefringent layer (a);  $n_x'$ ,  $n_y'$  and  $n_z'$  indicate respectively refractive indexes in an X-axis direction, a Y-axis direction and a Z-axis direction in the transparent film (b); and the X-axis corresponds to an axial direction exhibiting a

maximum refractive index within a plane of the birefringent layer (a) and the transparent film (b), the Y-axis corresponds to an axial direction perpendicular to the X-axis within the plane, and the Z-axis corresponds to a thickness direction perpendicular to the X-axis and the Y-axis.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yano et al. (US Patent 6,795,264 B2) discloses an Optical film, polarizer and display device in Figure 1 comprising of a first birefringent film and a second birefringent film laminated on the first birefringent film so that optical axes of the first and second birefringent film intersect each other, in follow relations  $(n_x - n_y)d = Re$  and  $(n_x - n_z)/(n_x - n_y) = Nz$ ,  $n_z$  is a refractive index of corresponding one of said first and second birefringent films in a direction of a Z axis indicating a direction of a thickness of the birefringent film,  $n_x$  is a refractive index of the birefringent film in a direction of an X axis indicating a direction of a highest refractive index in a plane perpendicular to the Z axis,  $n_y$  is a refractive index of the birefringent film in a direction of a Y axis perpendicular both to the X axis and to the Z axis, and  $d$  is the thickness of the birefringent film; however, Yano et al. does not teach or fair suggest that a birefringent

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layer(a) and a transparent film (b), wherein the birefringent layer and the transparent film are satisfying all the following formulae:  $\Delta n(a) > \Delta n(b) \times 10$ ;  $1 < (n_x - n_z) / (n_x - n_y)$ ;  $0.0005 \leq \Delta n(a) \leq 0.5$ ;  $\Delta n(a)$  is a birefringent index of the birefringent layer (a) and  $\Delta n(b)$  is a birefringent index of the transparent film (b), respectively represented by the following equations:  $\Delta n(a) = [(n_x + n_y) / 2] - n_z$ ;  $\Delta n(b) = [(n_x' + n_y') / 2] - n_z'$ , in the above formulae (II) and the above-stated equations,  $n_x$ ,  $n_y$  and  $n_z$  indicate respectively refractive indexes in an X-axis direction, a Y-axis direction and a Z-axis direction in the birefringent layer (a);  $n_x'$ ,  $n_y'$  and  $n_z'$  indicate respectively refractive indexes in an X-axis direction, a Y-axis direction and a Z-axis direction in the transparent film (b); and the X-axis corresponds to an axial direction exhibiting a maximum refractive index within a plane of the birefringent layer (a) and the transparent film (b), the Y-axis corresponds to an axial direction perpendicular to the X-axis within the plane, and the Z-axis corresponds to a thickness direction perpendicular to the X-axis and the Y-axis.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Tra whose telephone number is (571) 272-2343. The examiner can normally be reached on Monday to Thursday from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps, can be reached on (571) 272 - 2328. The fax number for this Group is (703) 872-9306.

TT

August 11, 2005



Hung Xuan Dang  
Primary Examiner

10/501959

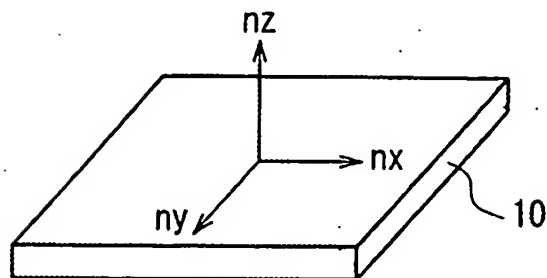


FIG. 1

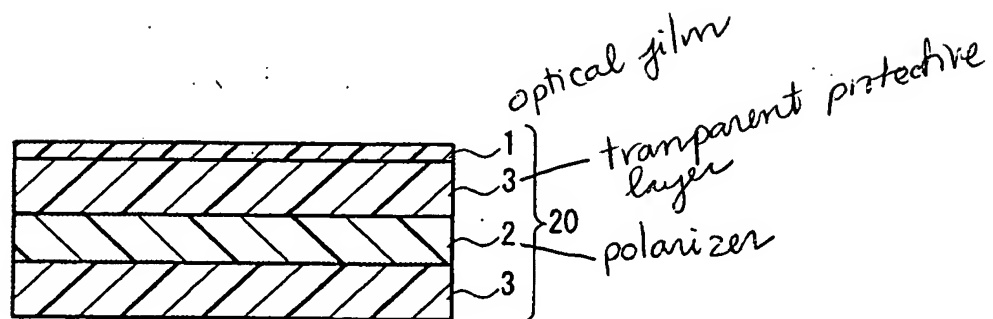


FIG. 2

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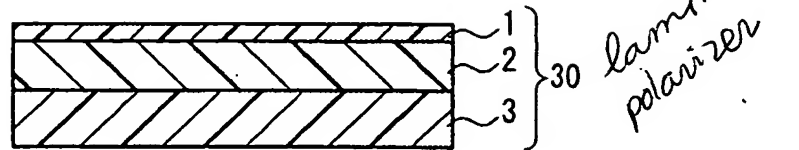


FIG. 3

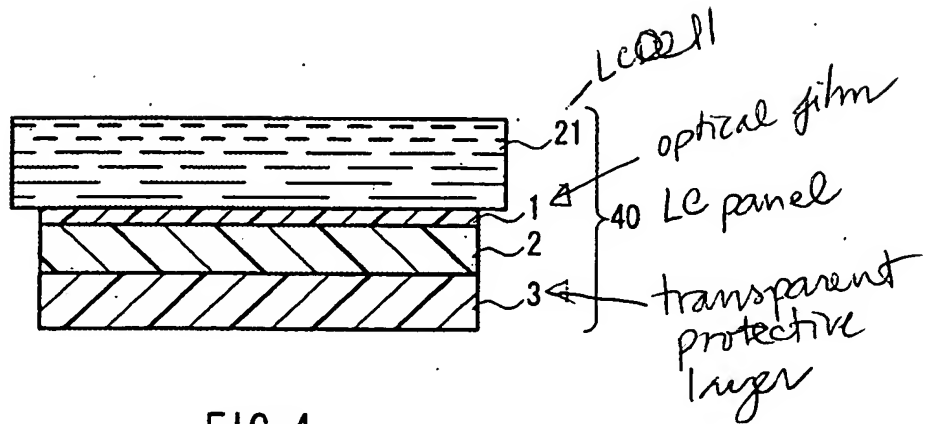


FIG. 4